

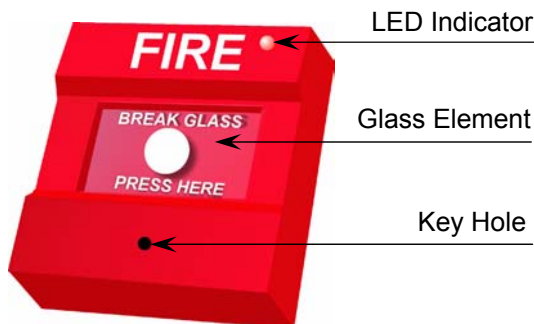
IPR 513-3A

Addressable Manual Call Point

Revision 01 (Version 1.02)

Revision 02 (Version 1.03)

Instruction Manual



Find the following unpacking IPR 513-3A:

- ✓ IPR 513-3A Addressable Manual Call Point
- ✓ This Instruction's Manual
- ✓ Test Key
- ✓ Two Wood-Screws
- ✓ Two Wall-Plugs 6×30

General

IPR 513-3A Addressable Manual Call Point (hereinafter referred to as IPR 513-3A or call point) is designed to be used in a fire alarm system in order to activate fire alarms manually. To operate the call point, the glass element is pressed on specified area until it is broken into two halves. This will activate the built-in microswitch which will generate a fire alarm in the S2000-KDL controller.

An IPR 513-3A operates under control of a S2000-KDL controller which supplies power and communicates data with the IPR 513-3A via the two wire Multiplex Addressable Loop.

The call point operability can be tested periodically using the key provided.

IPR 513-3A supports *Zone ADC* request commands from the Orion system transmitting to the S2000-KDL the ADC (analog-to-digital) values enabling estimation of its conditions.

The **IPR 513-3A of revision 02** is equipped with a **built-in short circuit isolator** which disables the segment of the addressable loop located between this IPR 513-3A and another short circuit isolator or at the end of the Multiplex Addressable Loop in case of a short circuit and automatically reconnects it after the fault has been repaired.

IPR 513-3A Addressable Manual Call Point is intended for round the clock use.

Specifications

Input Voltage (from a S2000-KDL)	8 ÷ 10 VDC
Current Consumption (via addressable loop of the S2000-KDL)	
quiescent	0.5 mA max
short circuit condition (for IPR 513-3A rev.02 only)	3 mA max
Technical Readiness Time	60 s max
Isolator Activation Time (for IPR 513-3A rev.02 only)	200 ms max
Operating Temperatures	–30 to +55°C
Humidity	93% at 40°C, non-condensing
Overall Dimensions	100×100×40 mm max
Weight	0.2 kg max
Average Lifetime	at least 10 years

LED Indicator

Each IPR 513-3A call point is equipped with a LED indicator which lights as follows:

Flashes red rapidly	IPR 513-3A is being programmed
Blinks red once every two second	IPR 513-3A is in normal operation mode
Blinks red twice every two second	IPR 513-3A glass is broken meaning the fire alarm

Mounting

Attach the IPR 513-3A to a wall using two wood-screws provided.

Wiring

IPR 513 3A Revision 01 Wiring

Figure 1 shows a typical wiring diagram for IPR-513 3A of revision 01 call points to S2000-KDL controller connecting. The contact 3 (marked as '-MAL') and the contact 4 (marked as '+MAL') of the XT1 connector are coupled with the contact 1 and the contact 2 respectively.

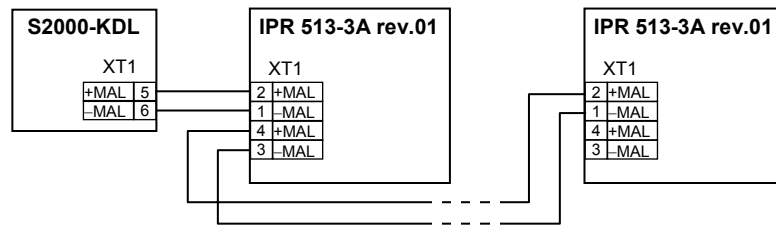


Figure 1. IPR 513-3A rev.01 to S2000-KDL Controller Connection Diagram

IPR 513 3A Revision 02 Wiring

The Multiplex Address Loop controlled by S2000-KDL is connected to an IPR 513-3A rev.02 call point via a 4-way terminal block (see Figure 2). Built-in short circuit isolator is symmetrical. Contacts 2 and 4 (marked as '+MAL') are isolated from each other, while contacts 1 and 3 (marked as '-MAL') are electrically coupled. Figures 3, 4 and 5 show IPR 513-3A rev.02 wiring diagrams in case of loop, tree and mixed network topology types correspondently.

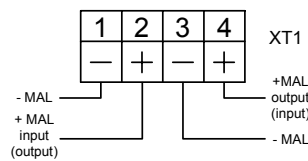


Figure 2. IPR 513-3A rev.02 to MAL Wiring

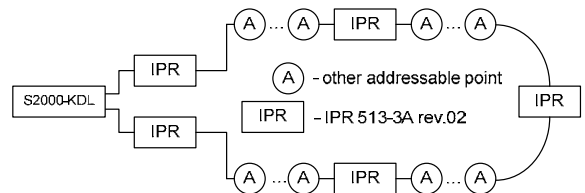


Figure 3. Loop Network Topology

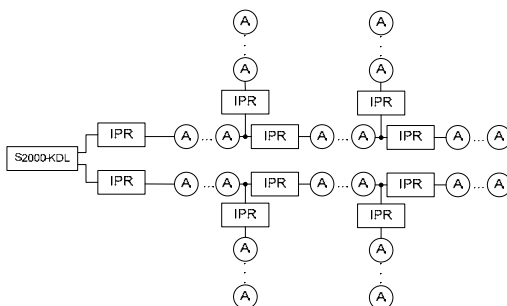


Figure 4. Tree Network Topology

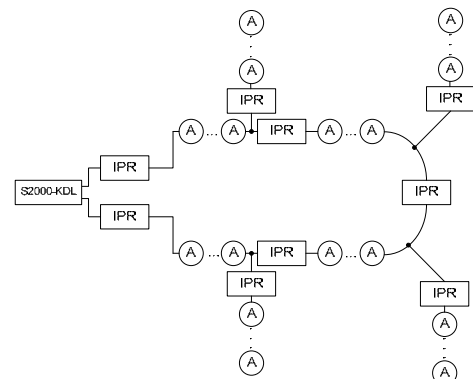


Figure 5. Mixed Network Topology

Programming

In order for the IPR 513-3A to operate properly within two-wire loop of the S2000-KDL controller it is necessary to assign the call point to a unique number within loop address space (or the address) from 1 to 127 to be identified by the controller. Moreover it must define the type of monitoring strategy which will be used by the S2000-KDL controller while processing signals received from the IPR 513-3A call point.

Programming the IPR 513-3A Address within the S2000-KDL Addressable Loop

Each device included into the Multiplex Addressable Loop controlled by a S2000-KDL controller must have a unique loop address. An IPR 513-3A is supplied with default address of 127, the address value being stored in the IPR 513-3A non-volatile memory. This address value can be changed using either S2000(M) console tools or PC tools such as ARM Orion or UProg Configuration Tool.

In order to program IPR 513-3A loop address connect it to a S2000-KDL controller which is in turns connected to a S2000(M) console or PC under UProg or ARM Orion software. Then send one of the following commands to the S2000-KDL controller (for getting more information see the relevant user's Manual):

Program the Device Address	If the device address is unknown or two devices have the same address then use this command specifying the required address as a parameter. The call point LED shall flash indicating programming mode. Then insert the Test Key to the Key Hole and turn it 90 degrees clockwise (induce two call point activations) twice within 10 seconds. The message about detecting the device with the newly assigned address shall be displayed by a net controller (S2000(M) or ARM Orion) or UProg Configuration Tool.
Change the Device Address	If it is necessary to change the already existing (and known) device address use the <i>Change the Device Address</i> command specifying the old device address and the new device address as the parameters (see more information in the referred Manuals). The net controller will display the messages about the device with the old address disconnection and then the device with newly programmed address detecting.

Zone Monitoring Type Programming

To handle signals from IPR 513-3A correctly, the S2000-KDL controller must be programmed with *Zone Type* parameter for the IPR513-3A being set to value 3 (Heat). In this case, upon call point being activated the S2000-KDL controller will indicate fire alarms.

To program S2000-KDL connect it to a PC under UProg Configuration Tool and follow the relevant programming instructions in accordance with the S2000-KDL User's Manual.

IPR 513 3A Routine Testing

Please disconnect executive outputs of all system devices and modules that can activate an automated fire-fighting system, light and sound alarms, and notify all it may concern before IPR 513-3A testing.

After testing verify that all call points are ready to operate, restore operability of all the disconnected system components, and inform the relevant departments about completing the test.

Routine Test Using the Test Key

Test the IPR 513-3A call point using the test key supplied regularly 15-20 times within a year. Routine testing is made with the test key without breaking the glass element. Do the following:

1. Arm the manual call point being tested by means of S2000(M) console or PC.
2. Insert the test key into the key hole and turn it 90° clockwise, simulating the breaking of the glass element. The glass element will shift down. Verify that the LED indicator is blinking red twice every 2 seconds, as well as the FIRE message is being displayed by a network controller. If the FIRE message has not been received by the network controller then the IPR 513-3A call point **is inoperable and must be replaced**.
3. Turn the test key 90° back. Verify that the LED indicator is blinking red once every 2 seconds. Cancel the fire alarms using network controller tools (see relevant instructions for the network controller). Get the key out the hole.

Inspecting ADC Value Received From the IPR 513-3A

IPR 513-3A call points support system requests for ADC values received from the system controller. So these values can be used for additional assessing call point operability conditions. If operation condition of an IPR 513-3A is normal, its ADC value is 0. For the call point having just actuated the ADC value is 100. To get more information see the description of *Zone ADC* request command in the relevant net controller Manual.

Inspecting Short Circuit Isolator Operability (for IPR 513-3A revision 02 only)

To inspect operability condition of the IPR 513-3A rev.02 built-in short circuit isolator, do the following:

1. Couple the '–MAL' and the "2 +MAL" contacts of the XT1 connector. If the tree network topology is in use then the network controller must display the messages about disconnection of all the addressable devices that are brought to the two-wire Multiplex Addressable Loop after the call point in question (that is, all addressable devices that are located between the call point and free end of the loop branch will be cut off). If otherwise the loop network topology is in use then the network controller must display the messages about disconnection of all the addressable devices brought between the call point in question and a next short circuit isolator.
2. Break the '–MAL' and the "2 +MAL" contacts. The network controller must detect all the missing devices.
3. Repeat the step 1, coupling the '–MAL' and the "4 +MAL" contacts of the XT1 connector.

NOTE: Avoid coupling of contacts that are located immediately to the S2000-KDL outputs.

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